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Thermolysis of 7-isopropylidene-2,3-diazabicyclo [2.2.1] hept-2-ene in the presence of spin trap

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Abstract

Thermolysis of 7-isopropylidene-2,3-diazabicyclo-[2.2.1] hept-2-ene **(1)** in the presence of trapping agent, α-phenyl tert-butyl nitrone **(2)** in acetonitrile solution at 70-90°C produced a six-line EPR spectrum with the following hyperfine coupling constants: AN = 14.9 G and A_H = 2.0 G. The structure was assigned to an isopropylidenecyclopentanyl radical diadduct **(5)** whose hyperfine coupling constants were found to be consistent with those in cyclohexadienyl adducts **(4)** observed by Mao and Kevan. The formation of the biradical **(3)** is ruled out.

Graphical Abstract


(4K)

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